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EXAMINER	
LU, CHARLES EDWARD	

ART UNIT	PAPER NUMBER
2163	

DATE MAILED: 02/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/623,621	SHIN, HYOSEOP	
	Examiner	Art Unit	
	Charles E. Lu	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *54-72* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *54-72* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 May 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 4/16/2004; 3/1/2005; 6/20/2005; 11/16/2005
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 54-72 have been submitted for examination.

2. Claims 54-72 have been rejected.

Drawings

The examiner acknowledges that two sets of replacement drawings were received (April 16, 2004, and May 14, 2004).

3. The drawings are objected to because of the following informalities:

The figures should be labeled "Prior Art" if the figures intend to represent prior art (e.g., fig. 5, 7). These figures may be prior art since they are described in the Background of the Invention.

Since the lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors, Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the drawings. For example, the drawings should be carefully checked to ensure that all reference numerals are described in the specification.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The examiner acknowledges that a replacement specification was received (May 14, 2004).

4. The specification is objected to because of the following informalities:

The title of the invention is neither precise nor descriptive. A new title is required which should include, using twenty words or fewer, claimed features that differentiate the invention from the prior art. It is recommended that the title should reflect the gist of or the improvement of the present invention.

The specification should list any related applications.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the

specification. For example, the specification should be carefully checked to ensure that all reference numerals are described in the drawings.

Appropriate corrections are required.

Double Patenting

5. Given the provisional nature of co-pending applications 10/623,658; 10/845,210; 10/845,211; 10/845,330; and 10/845,443, and the current application, double patenting will be revisited should the case be in condition for allowance sans the double patenting between the cases.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 56, 57, 58, and 64 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 57 and 58, the claims do not comply with the requirements of 35 U.S.C. 112, second paragraph because the trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product (i.e. X Path). *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. In fact, the value of a trademark would be lost to the extent that it became

descriptive of a product, rather than used as an identification of a source or origin of a product. Thus, the use of a trademark or trade name in a claim to identify or describe a material or product would not only render a claim indefinite, but would also constitute an improper use of the trademark or trade name.

As to claim 57, line 2, it is unclear as to what "fragment/key" means.

As to claims 56 and 58, first referring to claim 58, line 1, it appears confusing as to what "the other one" means. The above is reasonably interpreted to be the other limitation from the group consisting of "location information of the fragment" and "location information of the key" as seen in claim 56. However, by using language such as "the other one," the scopes of both claims 56 and 58 are unclear because the scopes will depend on which item was chosen in claim 56.

As to claim 64, line 3, there is insufficient antecedent basis for the limitation "the keys within the fragment."

The broadest reasonable interpretation in light of the specification has been given to the claims. Art rejection of the above claims is applied as best understood in light of the rejection under 35 U.S.C. 112, second paragraph, discussed above.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 54-72 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As to claim 54, the claimed index structure is descriptive material per se, and therefore non-statutory. Furthermore, there is no functional interrelationship in the index structure of claim 54.

Claims 55-62 are rejected under 35 U.S.C. 101 because of their dependency on rejected claim 54 and their failure to cure the deficiencies of claim 54.

As to claim 63, the claimed index structure is descriptive material per se, and therefore non-statutory.

Claims 64-66 are rejected under 35 U.S.C. 101 because of their dependency on rejected claim 63 and their failure to cure the deficiencies of claim 63.

As to claim 67, the claimed index structure is descriptive material per se, and therefore non-statutory. Furthermore, there is no functional interrelationship in the data structure of claim 67.

Claims 68-69 are rejected under 35 U.S.C. 101 because of their dependency on rejected claim 67 and their failure to cure the deficiencies of claim 67.

As to claim 71, the claim recites a computer readable medium but the medium can be interpreted as a signal (e.g., "carrier wave", page 42) and thus the claim is non-statutory.

As to claims 70 and 72, there is no functional interrelationship in the data structures. Therefore, claims 70 and 72 are non-statutory.

The art rejection of claims 54-72 is applied in anticipation of Applicant amending the claims to overcome the rejection under 35 U.S.C. 101, discussed above.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 54-72 are rejected under 35 U.S.C. 102(a) as being anticipated by Evain ("1st Draft of Metadata Specification SP003v1.3," XP002323574), provided by Applicant.

As to claim 54, Evain teaches an index structure for metadata divided into fragments (fig. 2), comprising a list of keys corresponding to the fields of the metadata (see key index list in fig. 2) and location information for defining a key (see syntax of a key index list in section 2.3.2, table), wherein at least a part of the location information is expressed as a predetermined code (see the program code in the syntax table in section 2.3.2).

As to claim 55, Evain teaches wherein the location information comprises location information of a fragment including the keys and location information of the keys within the fragment (see fig. 2 and table in section 2.3.2 of identifiers).

As to claim 56, Evain teaches wherein one of the location information of the fragment and the location information of the key is expressed as the predetermined code (see syntax table in section 2.3.2 and fig. 2)

As to claim 57, Evain teaches wherein the predetermined code comprises X Path as additional information where the respective fragment corresponds to a user defined type (see section 2.3.1.1).

As to claim 58, Evain teaches wherein the other of location information of the fragment and location information of the key is expressed as X Path (See syntax table in 2.3.2 and fig. 2, and the description for the table)

As to claim 59, Evain teaches values of the keys and identification information on the metadata corresponding to the values of the keys (identifiers, again see fig. 2, and section 2.3.2 table).

As to claim 60, Evain teaches a sub section including ranges of values of the key and the identification information on ones of the fragments of the metadata corresponding to the values of the key (see section 2.3.3 – 2.3.4).

Evain further teaches wherein the key index section comprises representative key values representing the respective ranges of values of the key (also see section 2.3.3 – 2.3.4).

As to claim 61, Evain teaches wherein the list includes identification information on the key index section (fig. 2, key index list has a key_index_identifier), and the section further comprises identification information on the sub-key index section (fig. 2, key index has a sub_index_identifier).

As to claim 62, Evain teaches wherein each of the representative key values is a value among the corresponding range of values of the key (see section 2.3.3).

As to claim 63, Evain teaches an index structure for metadata divided into fragments (fig. 2) comprising a key index section comprising a list of keys corresponding to the fields of the metadata (see key index list in fig. 2) and location information for defining the keys (see syntax of a key index list in section 2.3.2, table), wherein at least a part of the location information is expressed as a predetermined code (see the program code in the syntax table in section 2.3.2).

Evain further teaches a key index section (see fig. 2, key index) and sub-key index section (also see fig. 2, sub key index).

Evain further teaches wherein for a key of the key index list the sub-key index section comprises ranges of values of the key and the identification information on ones of the fragments of the metadata corresponding to the values of the key (see section 2.3.3 – 2.3.4).

Evain further teaches wherein the key index section comprises representative key values representing the respective ranges of values of the key (also see section 2.3.3 – 2.3.4).

As to claim 64, Evain teaches wherein the location information comprises location information of a fragment including the keys and location information of the keys within the fragment (see fig. 2 and table in section 2.3.2).

As to claim 65, Evain teaches a corresponding key index section and a corresponding sub key index section for another key of the key index list (see syntax table 2.3.2, fig. 2, note that a key index contains references to a sub key index, section 2.3.3).

As to claim 66, Evain teaches the key index section comprises identification information on the key index section (fig. 2, key index list has a key_index_identifier), and the key index section further comprises identification information on the sub-key index section (fig. 2, key index has a sub_index_identifier).

As to claim 67, Evain teaches an index structure for metadata divided into fragments (fig. 2) comprising a list of keys corresponding to the fields of the metadata (see key index list in fig. 2) and location information for defining the keys (see syntax of a key index list in section 2.3.2, table), wherein at least a part of the location information is expressed as a predetermined code (see the program code in the syntax table in section 2.3.2).

Evain further teaches values of the keys and identification information on the metadata corresponding to the values of the keys (identifiers, again see fig. 2, and section 2.3.2 table).

As to claim 68, Evain teaches wherein the identification information comprises identification information on the fragments of the metadata corresponding to the values of the keys (the identifier in the key index list identifies the key index corresponding to the value of the identifier, fig. 2, section 2.3.2 table).

As to claim 69, Evain teaches wherein the metadata has a structure as defined by the TV Anytime Forum (e.g., section 2.2).

As to claim 70, Evain teaches all of the claimed subject matter including:

A data structure for storing an index for metadata divided into fragments (fig. 2), the index provided to search the metadata (section 2.3.1), the data structure comprising

a list of keys corresponding to the fields of the metadata (see key index list in fig. 2) and location information for defining a key (see syntax of a key index list in section 2.3.2, table), wherein at least a part of the location information is expressed as a predetermined code (see the program code in the syntax table in section 2.3.2).

As to claim 71, Evain teaches all the claimed subject matter including:

A data structure for storing an index for metadata divided into fragments (fig. 2), the index provided to search the metadata (section 2.3.1), the data structure comprising a key index list section comprising a list of keys corresponding to the fields of the metadata (see key index list in fig. 2) and location information for defining the keys (see syntax of a key index list in section 2.3.2, table), wherein at least a part of the location information is expressed as a predetermined code (see the program code in the syntax table in section 2.3.2).

Evain further teaches a key index section (see fig. 2, key index) and sub-key index section (also see fig. 2, sub key index).

Evain further teaches wherein for a key of the key index list the sub-key index section comprises ranges of values of the key and the identification information on ones of the fragments of the metadata corresponding to the values of the key (see section 2.3.3 – 2.3.4).

Evain further teaches wherein the key index section comprises representative key values representing the respective ranges of values of the key (also see section 2.3.3 – 2.3.4).

As to claim 72, Evain teaches all of the claimed subject matter including:

A data structure for storing an index for metadata divided into fragments (fig. 2), the index provided to search the metadata (section 2.3.1), the data structure comprising a list of keys corresponding to the fields of the metadata (see key index list in fig. 2) and location information for defining the keys (see syntax of a key index list in section 2.3.2, table), wherein at least a part of the location information is expressed as a predetermined code (see the program code in the syntax table in section 2.3.2).

Evain further teaches values of the keys and identification information on the metadata corresponding to the values of the keys (identifiers, again see fig. 2, and section 2.3.2 table).

Conclusion

12. The following prior art cited on the PTO-892 form, not relied upon, is considered pertinent to applicant's disclosure:

Goldberg et al. U.S. Patent 5,655,117 discloses a method and apparatus for indexing multimedia information streams.

Eldering et al. Pub. No. 2002/0123928 discloses targeting ads to subscribers based on privacy-protected subscriber profiles.

Qian, Richard. Pub. No. 2002/0184195 discloses integrating content from media sources.

Wang et al. Pub. No. 2002/0174147 discloses a system and method for transcoding information for an audio or limited display user interface.

IBM_TDB. "EC XML Parser for Parsing XML Into Java Hashtable." August 1, 2000.

Yoshikawa et al. "X Rel: A Path-Based Approach to Storage and Retrieval of XML Documents Using Relational Databases." ACM Transactions on Internet Technology, Vol. 1, No. 1, August 2001. © 2001 ACM.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Lu whose telephone number is (571) 272-8594. The examiner can normally be reached on 8:30 - 5:00; M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on (571) 272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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